

Cable temperature sensor

Used as a duct temperature sensor with a mounting flange or as an immersion temperature sensor in combination with an immersion sleeve. With stainless steel probe and plenum-rated cable.



5-year warranty

Type Overview

Type	Output signal	Cable length	Probe length	Probe diameter
01CT-5AH	Pt100	6.5 ft [2 m]	2" [50 mm]	0.24" [6 mm]
01CT-5BH	Pt1000	6.5 ft [2 m]	2" [50 mm]	0.24" [6 mm]
01CT-5BL	Pt1000	6.5 ft [2 m]	4" [100 mm]	0.24" [6 mm]
01CT-5BP	Pt1000	6.5 ft [2 m]	8" [200 mm]	0.24" [6 mm]
01CT-5EH	Ni1000 (JCI)	6.5 ft [2 m]	2" [50 mm]	0.24" [6 mm]
01CT-5LH	NTC10k (10k2)	6.5 ft [2 m]	2" [50 mm]	0.24" [6 mm]
01CT-5LL	NTC10k (10k2)	6.5 ft [2 m]	4" [100 mm]	0.24" [6 mm]
01CT-5LP	NTC10k (10k2)	6.5 ft [2 m]	8" [200 mm]	0.24" [6 mm]
01CT-5MH	NTC10k3 (Precon)	6.5 ft [2 m]	2" [50 mm]	0.24" [6 mm]
01CT-5ML	NTC10k3 (Precon)	6.5 ft [2 m]	4" [100 mm]	0.24" [6 mm]
01CT-5MP	NTC10k3 (Precon)	6.5 ft [2 m]	8" [200 mm]	0.24" [6 mm]
01CT-5QH	NTC20k	6.5 ft [2 m]	2" [50 mm]	0.24" [6 mm]
01CT-5QL	NTC20k	6.5 ft [2 m]	4" [100 mm]	0.24" [6 mm]
01CT-5QP	NTC20k	6.5 ft [2 m]	8" [200 mm]	0.24" [6 mm]

Technical data

<b>Electrical Data</b>	Electrical connection	cable 6.5 ft [2 m], 2-wire
	Cable specification	1 pair shielded plenum cable, 22AWG tinned copper, green jacket, -40...300°F [-40...150°C], 300 V
<b>Functional Data</b>	Application	air water
	Output signal passive temperature	Pt100 Pt1000 Ni1000 (JCI) NTC10k (10k2) NTC10k3 (Precon) NTC20k
<b>Measuring Data</b>	Measured values	Temperature
<b>Specification Temperature</b>	Measuring range	-40...300°F [-40...150°C]

**Technical data**

<b>Specification Temperature</b>	Measuring current	Pt100: <1 mA @ 32°F [0°C] Pt1000: <0.3 mA @ 32°F [0°C] Ni1000 (JCI): <5 mA @ 21°C [70°F] NTC10k2: <2 mA @ 77°F [25°C] NTC10k3: <2.7 mA @ 77°F [25°C] NTC20k: <0.5 mA @ 77°F [25°C]
	Accuracy temperature passive	Passive sensors depending on used type Pt.. : ±0.5°F @ 32°F [±0.3°C @ 0°C] Ni.. : ±0.7°F @ 32°F [±0.4°C @ 0°C] NTC.. : ±0.35°F @ 77°F [±0.2°C @ 25°C]
	Time constant $\tau$ (63%) in water pipe	With thermowell A-22P-A.. and thermal contact fluid Typical 7 s with thermowell brass Typical 9 s with thermowell stainless steel
	Time constant $\tau$ (63%) in the air duct	Typical 155 s @ 0 m/s Typical 35 s @ 3 m/s
	<b>Safety Data</b>	Protection class IEC/EN
	Power source UL	Class 2 Supply
	Degree of protection IEC/EN	IP67
	Degree of protection NEMA/UL	NEMA 4X
	Certification IEC/EN	IEC/EN 60730-1
	Quality Standard	ISO 9001
	UL Approval	cULus acc. to UL60730-1A/-2-9, CAN/CSA E60730-1/-2-9
	Type of action	Type 1
	Rated impulse voltage supply	0.8 kV
	Method of mounting control	Surface mounted
	Pollution degree	3
	Ambient humidity	Max. 95% RH, non-condensing
	Ambient temperature	-40...300°F [-40...150°C]
	Fluid temperature	-40...300°F [-40...150°C]

**Safety Notes**


This device has been designed for use in stationary heating, ventilation and air-conditioning systems and must not be used outside the specified field of application. Unauthorized modifications are prohibited. The product must not be used in relation with any equipment that in case of a failure may threaten humans, animals or assets.

Ensure all power is disconnected before installing. Do not connect to live/operating equipment.

Only authorized specialists may carry out installation. All applicable legal or institutional installation regulations must be complied with during installation.

The device contains electrical and electronic components and must not be disposed of as household refuse. All locally valid regulations and requirements must be observed.

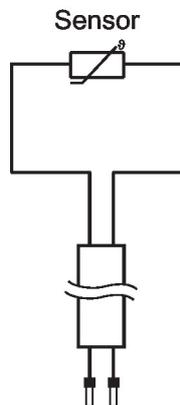
**Remarks**

<b>General Remarks Concerning Sensors</b>	Due to self-heating with 2 wire passive sensors, the supply wire current affects the measurement accuracy. So the supply current should not be higher than the measuring current values specified in this data sheet.  When using lengthy connecting cables (depending on the cross section used), the cable resistance must be taken into account. The lower the impedance of the sensor used, the greater the effect of the line resistance on the measurement, because it generates an offset.
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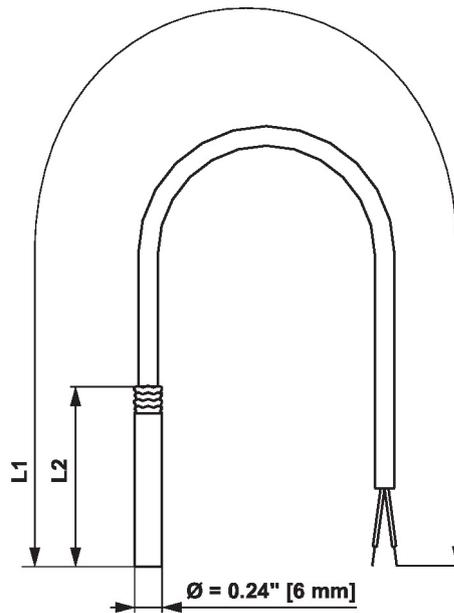
Accessories

Optional accessories	Description	Type
	Mounting flange for sensor probe 6 mm, up to max. 120°C [248°F], Plastic	A-22D-A03
	Mounting flange for sensor probe 6 mm, up to max. 260°C, Brass	A-22D-A05
Optional accessories air	Description	Type
	Mounting flange for sensor probe 6 mm, up to max. 120°C [248°F], Plastic	A-22D-A03
	Mounting flange for sensor probe 6 mm, up to max. 260°C, Brass	A-22D-A05
Recommended accessories water	Description	Type
	Thermowell (fabricated) Stainless steel, 2" [50 mm], 1/2" NPT, SW = 3/4"	A-22P-A05
	Thermowell (fabricated) Brass, 2" [50 mm], 1/2" NPT, SW = 3/4"	A-22P-A17
	Thermowell (machined) Stainless steel, 2" [50 mm], 1/2" NPT, SW = 3/4"	A-22P-A36
	Thermowell (fabricated) Stainless steel, 4" [100 mm], 1/2" NPT, SW = 3/4"	A-22P-A07
	Thermowell (fabricated) Brass, 4" [100 mm], 1/2" NPT, SW = 3/4"	A-22P-A19
	Thermowell (machined) Stainless steel, 4" [100 mm], 1/2" NPT, SW = 3/4"	A-22P-A37
	Thermowell (fabricated) Stainless steel, 6" [150 mm], 1/2" NPT, SW = 3/4"	A-22P-A09
	Thermowell (fabricated) Brass, 6" [150 mm], 1/2" NPT, SW = 3/4"	A-22P-A21
	Thermowell (machined) Stainless steel, 6" [150 mm], 1/2" NPT, SW = 3/4"	A-22P-A38
	Thermowell (fabricated) Stainless steel, 8" [200 mm], 1/2" NPT, SW = 3/4"	A-22P-A11
	Thermowell (fabricated) Brass, 8" [200 mm], 1/2" NPT, SW = 3/4"	A-22P-A23
	Thermowell (machined) Stainless steel, 8" [200 mm], 1/2" NPT, SW = 3/4"	A-22P-A39
	Thermowell (fabricated) Stainless steel, 12" [300 mm], 1/2" NPT, SW = 3/4"	A-22P-A13
	Thermowell (fabricated) Brass, 12" [300 mm], 1/2" NPT, SW = 3/4"	A-22P-A25
	Thermowell (fabricated) Stainless steel, 18" [450 mm], 1/2" NPT, SW = 3/4"	A-22P-A15
	Thermowell (fabricated) Brass, 18" [450 mm], 1/2" NPT, SW = 3/4"	A-22P-A27
	Syringe with thermal paste	A-22P-A44
	Cold barrier, Plastic, L 50 mm, for thermowell A-22P-A..	A-22P-A51

Wiring Diagram



## Dimensions



L1: cable length **L1 = 6.56 ft [2 m]**  
 L2: pocket length **L2 = 1.97'' [50 mm] / 3.94'' [100 mm] / 7.87'' [200 mm]**

Type	Probe length	Weight
01CT-5AH	2" [50 mm]	0.14 lb [0.065 kg]
01CT-5BH	2" [50 mm]	0.14 lb [0.065 kg]
01CT-5BL	4" [100 mm]	0.15 lb [0.070 kg]
01CT-5BP	8" [200 mm]	0.18 lb [0.080 kg]
01CT-5EH	2" [50 mm]	0.14 lb [0.065 kg]
01CT-5LH	2" [50 mm]	0.14 lb [0.065 kg]
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## Further documentation

- Installation instructions
- Resistance characteristics